

IN THE SPECIFICATION:

Please amend paragraph 0018 starting on page 3 as follows:

FIGs. 2A and 2B are top and side views, respectively, of a micro-chimney embodiment 200 including a semiconductor die 101 according to an embodiment of the present invention. Die 101, which is fabricated of silicon, includes one or more hot spots 110 associated with one or more mechanisms internal to die 101, such as a floating point unit 115. Hot spots 110 may correspond to areas in die 101 where heat generation is especially high. Die 101 also includes micro-chimneys 230.

Please amend paragraph 0020 starting on page 4 as follows:

Micro-chimneys 230 may be filled with a material of high conductivity known in the art, such as copper or silver. As such, micro-chimneys 230 provide a highly conductive, low thermal resistive path to dissipate heat away from hot spots 110 to cooler spots in die 101. The heat ultimately may be absorbed and dissipated by an external device (not shown), such as a thermal spreader or integrated heat spreader located near cooler spots in die 101. According to embodiments of the present invention, because heat is more efficiently dissipated, temperature gradients within a semiconductor die are reduced, and a more uniform heat flux leaves the die. Thermal stress on the die is reduced, and total heat from the die is more readily dissipated. As such, processors 120 may perform more reliably.